

**ANALYSIS AND IDENTIFICATION OF MALICIOUS MOBILE  
APPLICATION**

**A PROJECT REPORT**

**Submitted by,**

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*Under the guidance of,*

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Assistant Professor

*in partial fulfillment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

**IN**

**COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)**

**At**



**PRESIDENCY UNIVERSITY**

**BENGALURU**

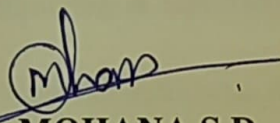
**MAY 2025**

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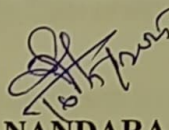
### CERTIFICATE

This is to certify that the Project report “**Analysis and Identification of Malicious Mobile Application**” being submitted by “**Murali Karthik**”, “**Shashank M**”, “**Keerthana S**” bearing roll number(s) “**20211CCS0138**”, “**20221LCC0002**”, “**20221LCC0003**” in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering (Cyber Security) is a bonafide work carried out under my supervision.



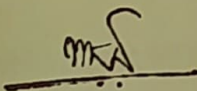
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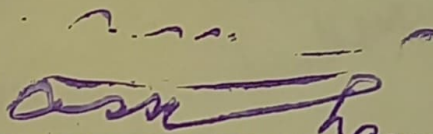
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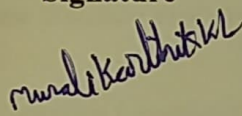
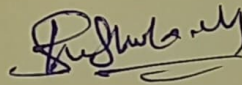
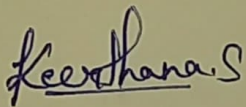
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### DECLARATION

We hereby declare that the work, which is being presented in the project report entitled “**Analysis and Identification of Malicious Mobile Application**” in partial fulfillment for the award of Degree of **Bachelor of Technology in Computer Science and Engineering (Cyber Security)**, is a record of our own investigations carried under the guidance of **Dr. Mohana S D, Assistant Professor, School of Computer Science Engineering & Information Science, Presidency University, Bengaluru.**

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

Name	Roll Number	Signature
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## ABSTRACT

In today's digital era, mobile devices are increasingly targeted by malware, posing significant security threats to users. The proliferation of malicious applications has made traditional detection methods, such as signature-based and heuristic approaches, less effective in identifying evolving malware threats. This study proposes a hybrid malware detection system integrated into an Android Studio WebView-based application that leverages VirusTotal API, machine learning techniques, and real-time threat intelligence to enhance malware detection accuracy.

The proposed system combines multiple detection approaches, including signature-based, heuristic, and behavioral analysis, to identify suspicious activities in mobile applications. Additionally, it incorporates IP and domain analysis features to assess potential security risks associated with network connections. The machine learning model continuously learns from emerging threats, improving the system's ability to detect zero-day attacks and polymorphic malware.

The research highlights the limitations of existing malware detection techniques, emphasizing the need for a comprehensive and adaptive approach. The system design and implementation involve developing a user-friendly mobile application that enables users to scan files, analyze URLs, and monitor network traffic for potential threats. Performance evaluations indicate that the proposed approach enhances detection efficiency, minimizes false positives and false negatives, and ensures real-time threat intelligence integration.

The findings of this research contribute to the field of cybersecurity and mobile threat detection by providing a scalable, intelligent, and accessible malware detection solution. The study concludes that hybrid and AI-driven methodologies significantly improve malware detection capabilities, making mobile devices more secure against evolving cyber threats.

**Keywords:** Malware Detection, Android Security, VirusTotal API, Machine Learning, Cyber Threat Intelligence, Hybrid Approach, Mobile Cybersecurity.

## ACKNOWLEDGEMENT

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We are greatly indebted to our guide **Dr. Mohana S D**, Assistant Professor and Reviewer **Ms. Battula Bhavya**, Professor, School of Computer Science Engineering & Information Science, Presidency University for his inspirational guidance, and valuable suggestions and for providing us a chance to express our technical capabilities in every respect for the completion of the project work.

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